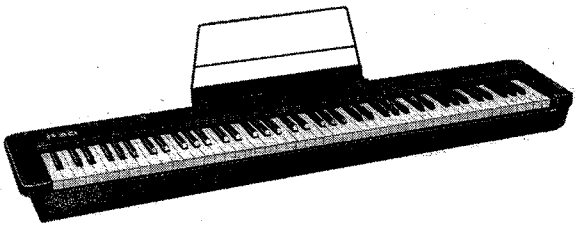
ORDER NO. EMID971656
A4

Service Manual

PCM Digital Piano

SX-P30

(M), (MC), (XM), (EN), (EH), (EF), (EZ), (EW), (EA), (EP), (EK), (XL), (XR), (XS), (XD), (XT), (X), (XP),(XW)



AREAS

(M): U.S.A.	(EK): the United Kingdom
(MC): Canada	(XL): New Zealand
(XM): Mexico	(XR): Australia
(EN): Norway, Sweden, Denmark, Finland	(XS): Malaysia
(EH): Holland, Belgium	(XD): Saudi Arabia, Hong Kong, Kuwait
(EF): France, Italy	(XT): Taiwan
(EZ): Germany	(X): Thailand, Indonesia, Iran, U.A.E., Panama, Argentina, Peru, Brasil
(EW): Switzerland	
(EA): Austria	
(EP): Spain, Portugal, Greece, South Africa	(XP): Philippines
	(XW): Singapore

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

■ Specifications

KEYBOARD	88 KEYS (WITH TOUCH RESPONSE)
MAXIMUM NUMBER OF NOTES PRODUCED SIMULTANEOUSLY	32 NOTES (STEREO 16 NOTES)
SOUND	PIANO, E PIANO
REVERB	○ (ON/OFF)
CONTROL	VOLUME, TUNE
OTHERS	PLAY, PHONES, DC IN 10 V, SUSTAIN, MIDI IN/OUT, LINE OUT (L, R/R+L)
POWER REQUIREMENT	WITH SY-AD8 AC ADAPTOR AC 120/220/230/240 V 50/60 Hz AC 120 V 60 Hz (NORTH AMERICA AND MEXICO)
DIMENSIONS (W × H × D)	136.5 cm × 10.3 cm × 27.1 cm (53-3/4" × 4-1/16" × 10-21/32") WITHOUT MUSIC STAND
NET WEIGHT	17 kg (37.5 lbs.)
ACCESSORIES	MUSIC STAND, AC ADAPTOR, SUSTAIN PEDAL

•Specifications are subject to change without notice for further improvement.

Technics

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WARNING

To prevent the risk of fire, smoke, or electrical shock and to ensure safe operation, please be sure to follow the safety guidelines below.

1. At places where special caution is required, the necessary safety precautions are clearly labeled or printed, for example, on the cabinet, or on the part concerned. Please follow these safety precautions, and also those listed in the Owner's Manual.

2. Parts which have a ⚠ mark in the circuit diagram or in the parts list are essential for safety. When replacing these parts, be sure to use only the specified parts.

3. Use the specified types for internal wiring (double-insulated wiring, etc.).

4. Do not let the wiring come into contact with heat-emitting devices (fuse resistor, radiator plate, etc.).

5. When replacing the wiring, make sure that it is not in contact with the unfinished or rough edge of a part.

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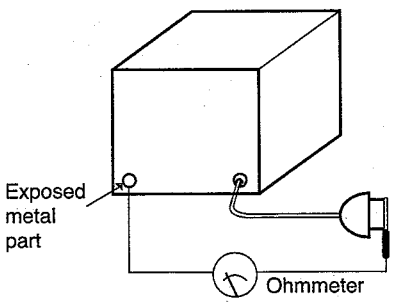
SAFETY PRECAUTION

● Safety Precaution

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only the manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

● Insulation Resistance Test

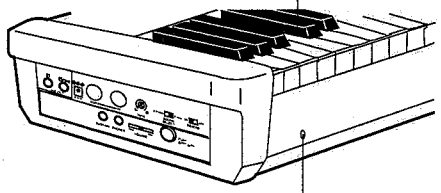
1. Unplug the power cord and short the prongs of the plug with□a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screw heads, connectors, control shafts, handle brackets, etc. Measurements should range from 4 MΩ to infinity for all exposed parts.



Resistance = 4MΩ to ∞

TERMINALS AND CONTROL PANEL

Keyboard
You can control the volume by playing the keys harder or softer (Touch Response).



Indicator
The indicator is lit while the **PLAY** button is on.

MIDI terminals
MIDI (Musical Instrument Digital Interface) is the standard specification that enables connection to equipments such as synthesizers and personal computers.

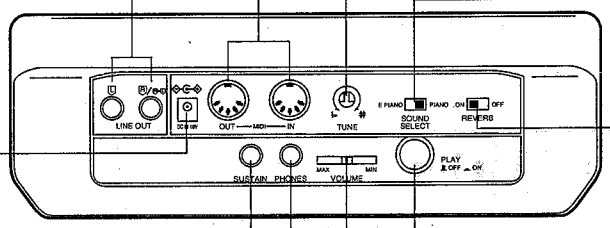
IN: The terminal that receives data from external equipment.
OUT: The terminal that transmits data from this instrument to external equipment.
•Use a 5-pin DIN cord (less than 15 m long) for these connections.

Output terminal (LINE OUT)
You can produce the sound from this instrument on an external speaker amplifier or stereo equipent.
(output level 1.5Vrms, 600Ω)

DC IN
Connect the included adaptor to this terminal.

SUSTAIN terminal
Connection terminal for the included Sustain Pedal.

Headphones terminal
Connect the headphones to this terminals.



TUNE
The center setting is the standard pitch (A=440 Hz.).

SOUND SELECT
Select a sound.

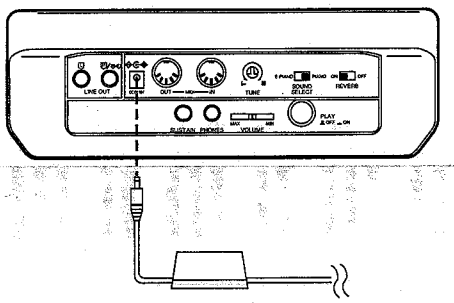
REVERB
Add a reverberation effect to the sound.

PLAY button
The on/off switch for this instrument.

VOLUME
Adjust the volume.

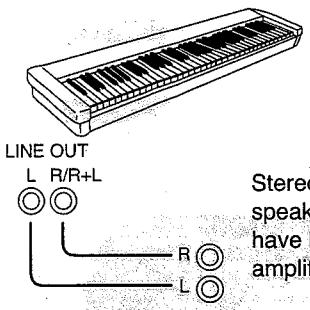
CONNECTION OF TERMINALS

■ **Plug the AC adaptor (included) into an outlet**
Connect the connecting plug of the AC adaptor (supplied) to the **DC IN** terminal of the instrument, and the power-supply plug to a wall outlet.



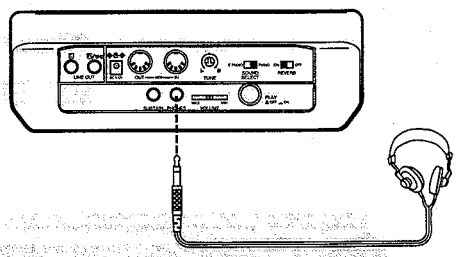
■ **Connect audio equipment to the piano**
Since this instrument has no built-in speakers, connect a stereo set and/or speakers that have built-in amplifiers.

- For monaural sound, connect the cord to the **R/R+L** terminal. (Do not connect the cord to the **L** terminal.)

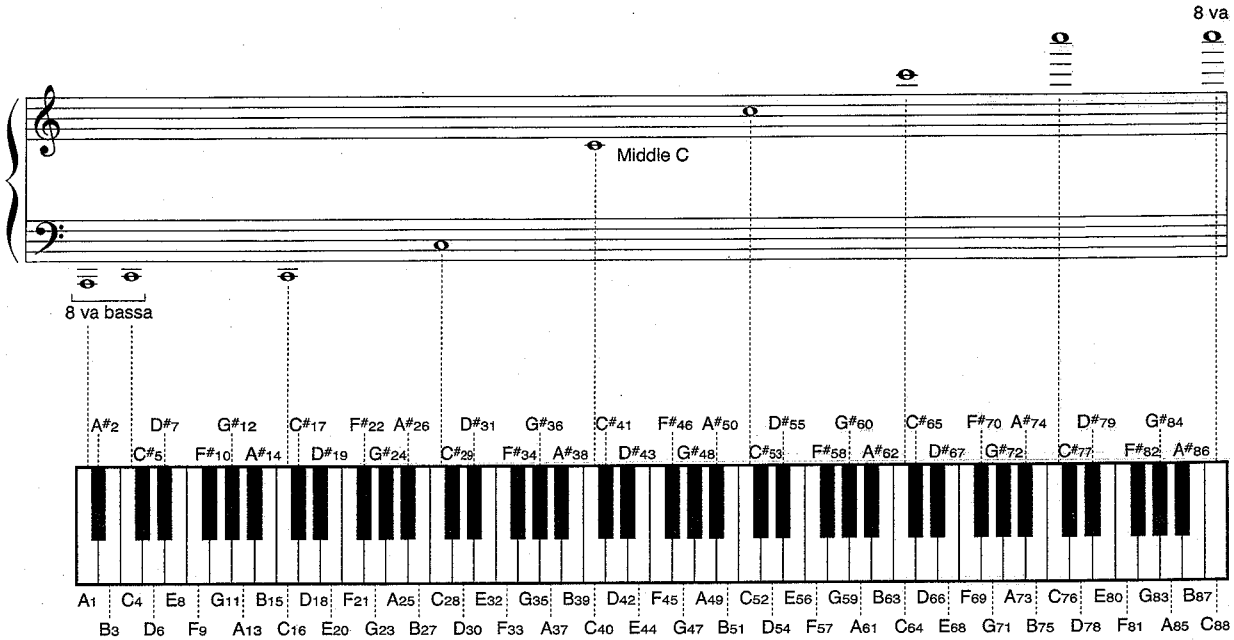


Stereo set, speakers that have built-in amplifiers, etc.

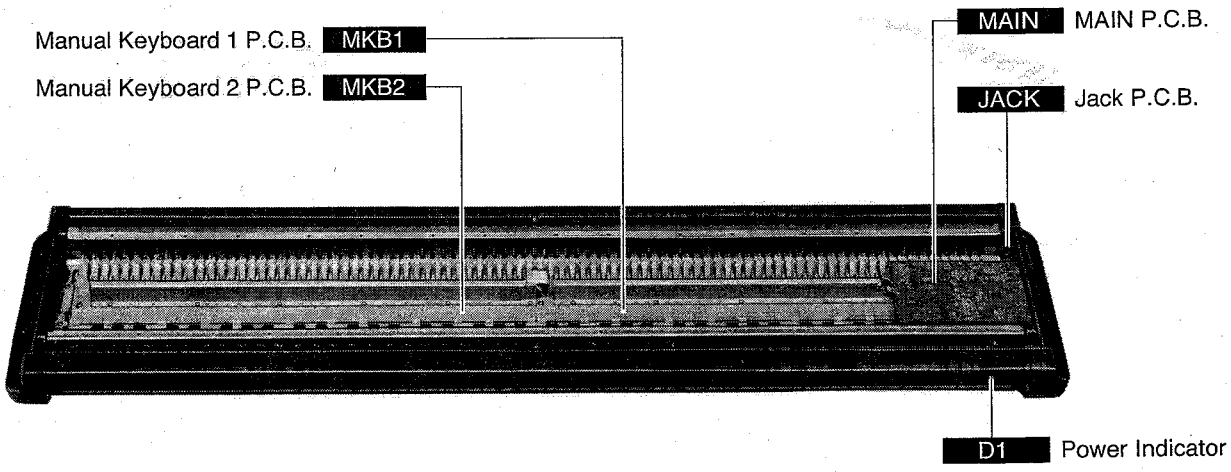
- You can also hear the sound with headphones by connecting them to the **PHONES** terminal.



KEYBOARD RANGES



PARTS LOCATION

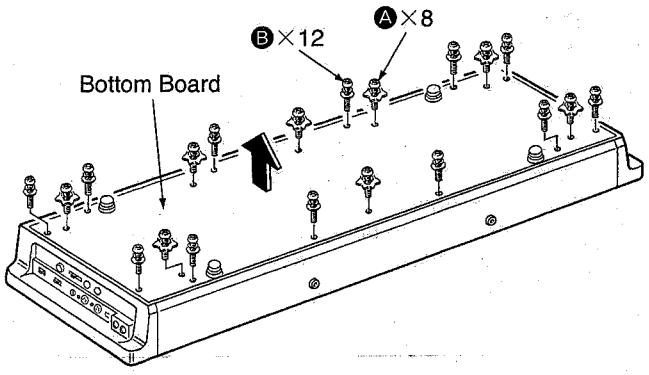


[photo-1]

DISASSEMBLY INSTRUCTIONS

1 Removing the bottom board

1. Turn the keyboard cabinet upside down as shown in Fig. 1.
2. Remove the bottom board mounting screws (Ⓐ 8 pcs. and Ⓑ 12 pcs.).



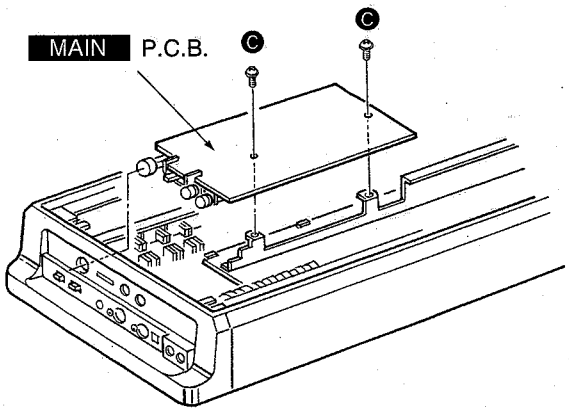
[Fig. 1]

2 Removing the MAIN printed circuit board

- Remove the bottom board (see step 1).

MAIN P.C.B.

1. Remove the MAIN P.C.B. mounting screws (Ⓒ 2 pcs.).
2. Pull out the connectors on the MAIN P.C.B.

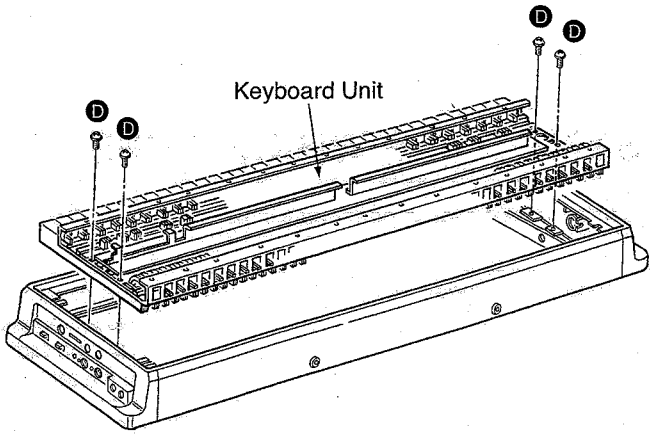


[Fig. 2]

3 Removing the keyboard unit

- Remove the bottom board and the MAIN P.C.B. (see step 1 and 2).

1. Remove the keyboard unit mounting screws (Ⓓ 4 pcs.).
2. Remove the keyboard unit by raising the back of the unit and lifting it out.



[Fig. 3]

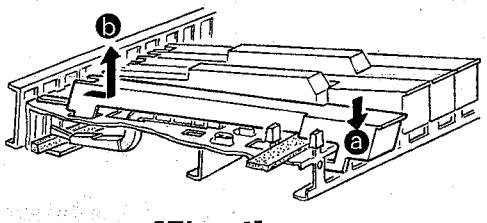
4 Key (s)

Disassembly

1. Remove the keyboard unit (see step 3).
2. Release the key claw.
   - ⓐ Press the front of the key downward slightly.
   - ⓑ Press the rear of the key forward gently.
3. To remove the key, lift it as shown in Fig. 4.

NOTE:

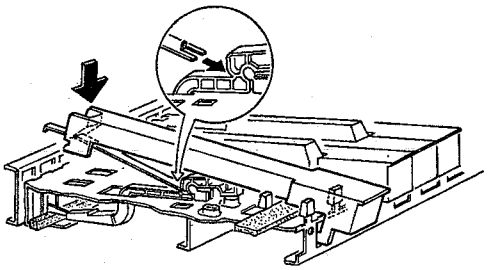
- The key claw is easily broken. Do not apply undue force. Should a key claw break, it can still be used; however, a replacement is recommended.
- If a black key is to be replaced, it is necessary to remove both adjacent white keys.



[Fig. 4]

Assembly

1. Insert the front part of the key into the chassis.
2. Insert the plate spring into the hammer notch as shown in Fig. 5.
3. While slowly lowering the key into the chassis, insert the plate spring into the notch at the rear of the key.
4. Carefully insert the key into the opening in the chassis and slide the key towards the rear to lock it in place.



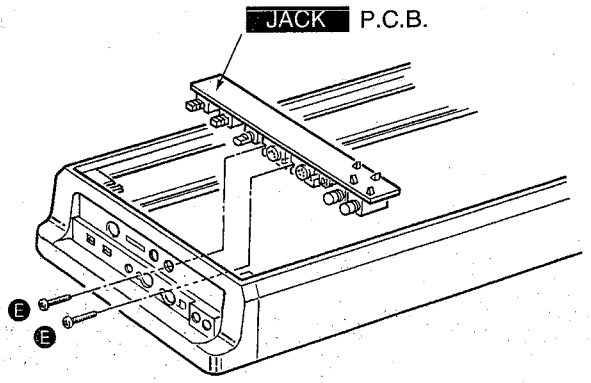
[Fig. 5]

5 Removing the JACK printed circuit board

- Remove the keyboard unit (see step 3).

JACK P.C.B.

1. Remove the JACK P.C.B. mounting screws (Ⓔ 2 pcs.).
2. Pull out the connectors on the JACK P.C.B.



[Fig. 6]

SYMPTOMS WHICH APPEAR TO BE SIGNS OF TROUBLE

The following changes in performance may occur in the Technics Digital Piano but do not indicate trouble.

Phenomenon	Remedy
No sound is produced when the keyboard is played.	• Connect the piano to the stereo set or headphones. • No sound is produced if the **VOLUME** is set to **MIN**. Use the sliding control to set the volume to an appropriate level. • If the MIDI LOCAL CONTROL is set to off, set it to on.
Data cannot be exchanged through MIDI terminals.	• Match the channels on the transmitting side and the receiving side. • The MIDI data isn't transmitted during the demonstration performance.

MIDI IMPLEMENTATION CHART

Digital piano [SX-P30]

Function		Transmitted	Recognized	Remarks
Basic Chanel	Default Changed	1 1–16	1 1–16	
Mode	Default Messeages Altered	3 × —	3 × —	
Note Number	True voice	21–108 —	0–127 0–127	
Velocity	Note ON Note OFF	○ (9nH: V=1–127) × (9nH: V=0)	○ ×	
After Touch	Key's Ch's	× ×	× ×	
Pitch Bend		×	×	
Control Change	64 67	○ ×	○ ○	Sustain pedal Soft pedal
Prog Change	True #	× —	× —	
System Exclusive		×	×	
System Common	Song Pos Song Sel Tune	× × ×	× × ×	
System Real Time	Clock Commands	× ×	× ×	
Aux Message	Local ON/OFF All Notes OFF Active Sence Reset	× × ○ ×	○ ○ ○ ×	
Notes				

Mode 1: OMNI ON, POLY **Mode 2:** OMNI ON, MONO ○: Yes
Mode 3: OMNI OFF, POLY **Mode 4:** OMNI OFF, MONO ×: No

PRECAUTIONS BEFORE SERVICING

■ Precautions for measuring of the output waveforms.

1. The waveform was measured with a "National Digital Storage Oscilloscope VP-5730A". Therefore the waveforms of musical tone signals shown may differ somewhat due to the difference in the timing of triggering.
2. Since the 1/10 test probe is used, the indicated voltage value on the bottom part of each waveform photo is 1/10 of the actual value (e.g. 0.2 V/cm should be 2.0 V/cm).

■ Important safety notice:

Components identified by a ⚠ mark have special characteristics impotant for safety.
When replacing any of these components, use only manufacture's specified parts.

■ Symbolic Marks

The symbolic marks for resistors and capacitors which used in this circuits are classified as following TABLE-1 and TABLE-2.

1. RESISTORS
   - Resistors without symbolic mark are FIXED CARBON FILM RESISTORS (ERD-type).
   - All resistors are 1/4 WATT, ±5 % TOLERANCE unless otherwise designated in schematic diagrams.

(TABLE-1)

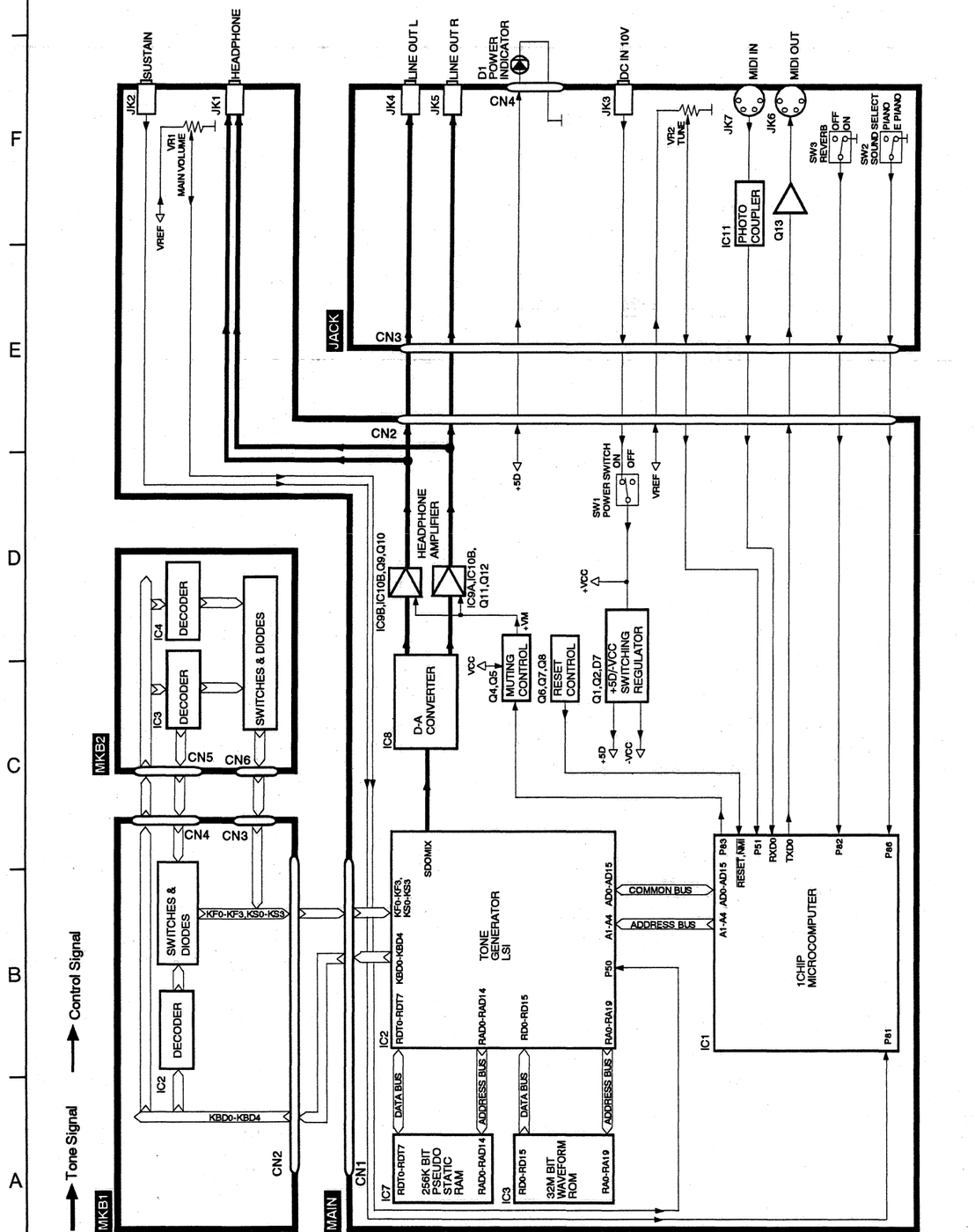
SYMBOL	SPECIFICATION	SYMBOL	SPECIFICATION
Ⓕ	Fixed Carbon Film Resistors "FLAME-PROOF" (ERD—F—type)	Ⓕ	Fixed Metal Film Resistors "FLAME-PROOF" (ERX—type)
Ⓕ	Fixed Wire Wound Resistors "FLAME-PROOF" (ERF—type)	[F]	Fuse Type Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERQ—type)
Ⓕ	Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERG—type)	[F]	Fuse Type Fixed Carbon File Resistors "FLAME-PROOF" (ERD2FC—type)
Ⓖ	Fixed Metal Film Resistors (Precision and High Stability) (ERO—type)		

2. CAPACITORS
   - Capacitors without symbolic mark are POLYESTER CAPACITORS. (ECQM-type, ECQG-type, ±10 % Tolerance)
   - Polarized capacitors without symbolic mark are Aluminum Electrolytic Capapcitors. (ECEA-type, ±20 % Tolerance)

(TABLE-2)

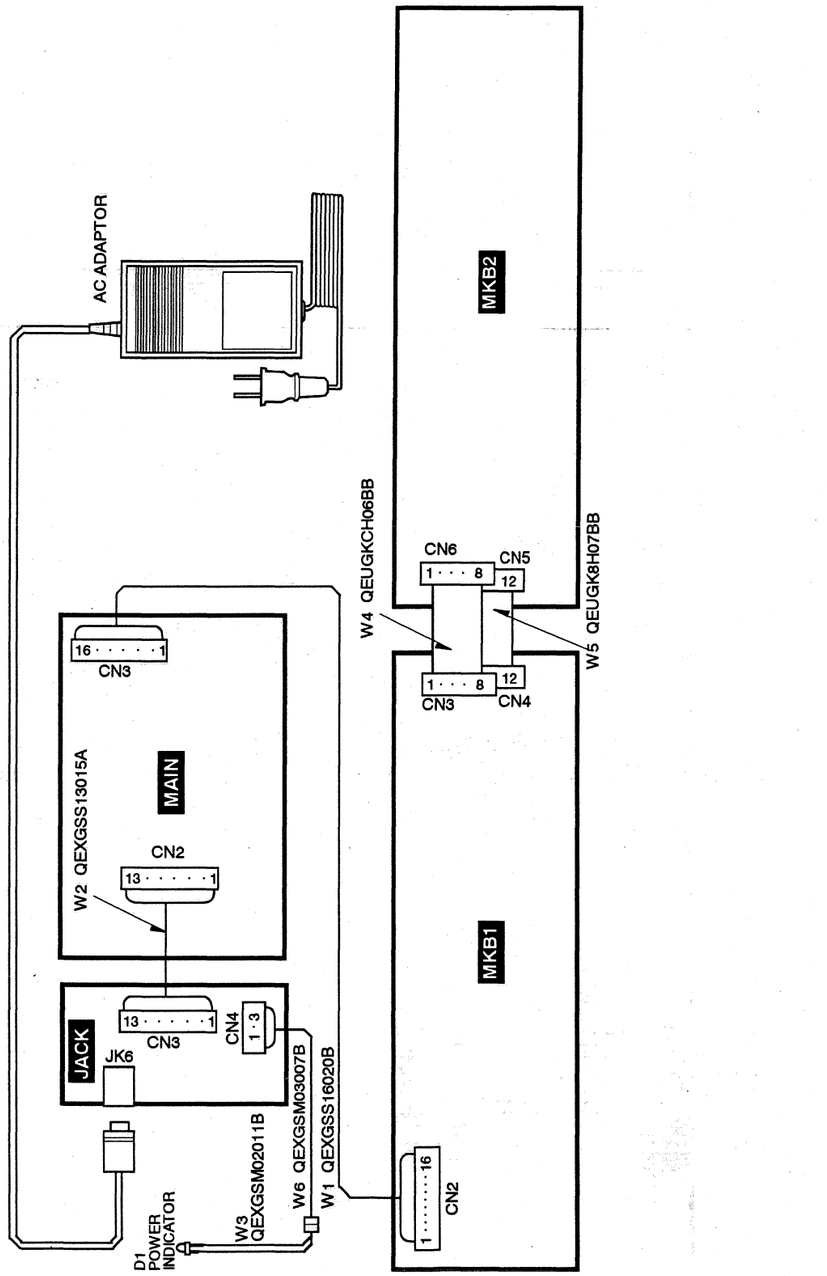
SYMBOL	SPECIFICATION	TYPE
Ⓝ	Non-Polarized Electrolytic Capacitors	ECEA_KN_type
Ⓨ	Non-Polarized Electrolytic (for Network system)	ECEA_Y_type
Ⓣ	Tantalum Solid Electrolytic Capacitors	ECS_type
ⓉⒻ	Metalized Plastic Film Capacitors (TF Series)	ECQV_type
○	Temperature Compensating Ceramic Capacitors	ECC_type
	High-Dielectric Constant Ceramic Capacitors	ECK_type ECR_type
	Axial Lead Ceramic Capacitors	ECB_type
	Metalized Polyester Film Capacitors for Across the Line	ECQ_EW_type
	Aluminum Electrolytic Capacitors for Smoothing Circuit	ECES_type
	Multilayer Ceramic Chip Capacitors	ECUV_type

BLOCK Diagram



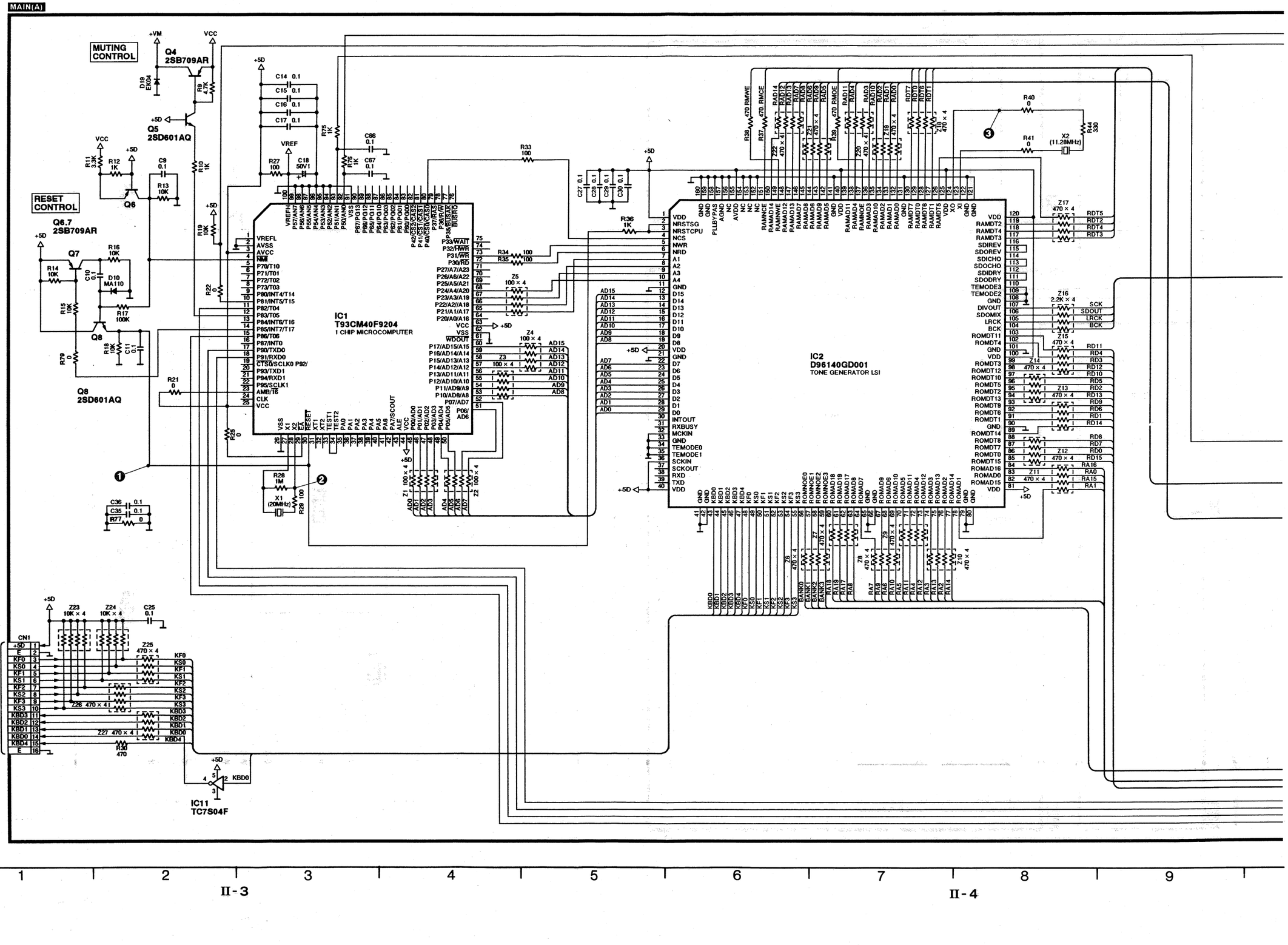
II-1

WIRING CONNECTION Diagram

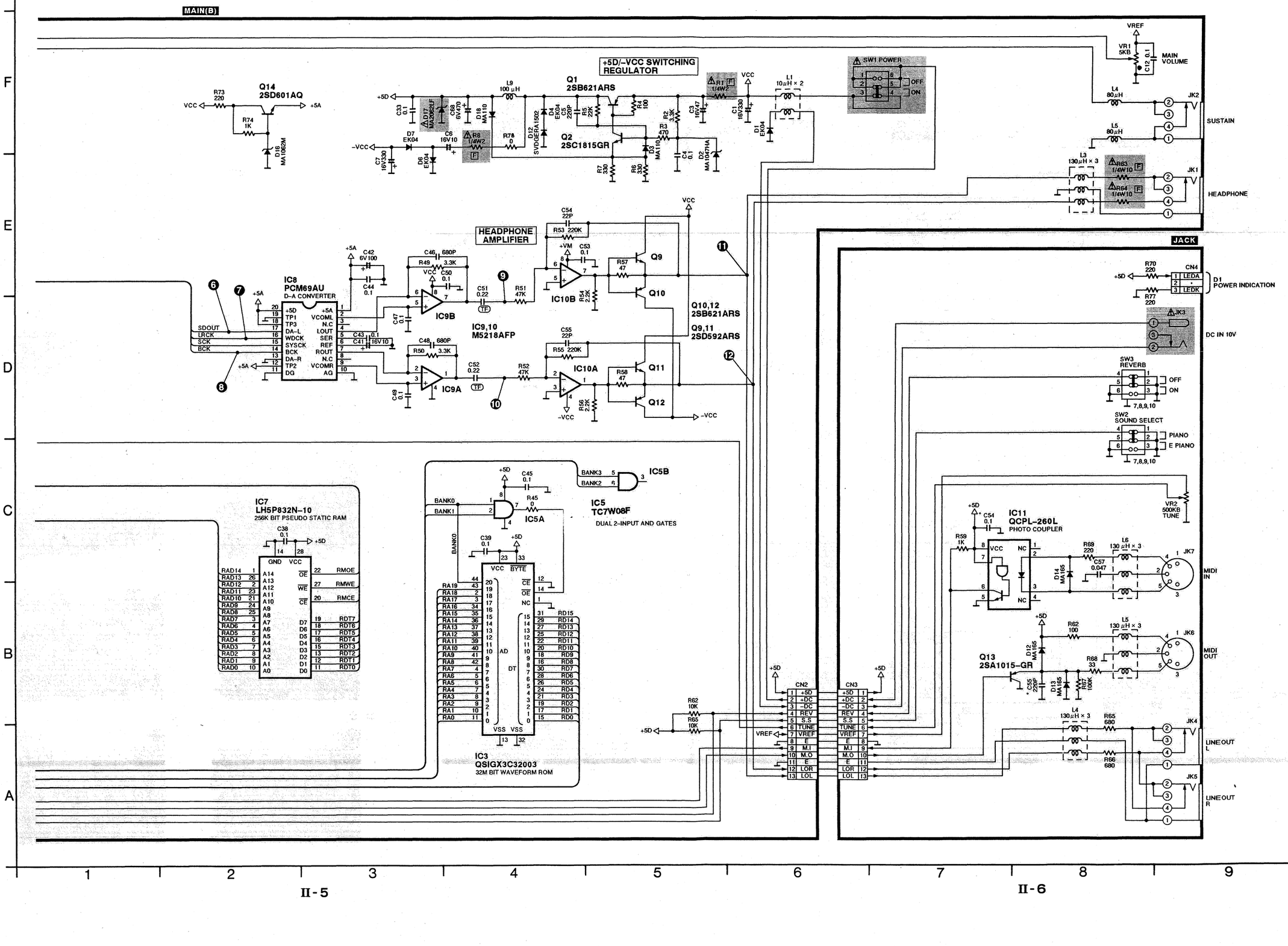


II-2

MAIN (A) P.C. Diagram

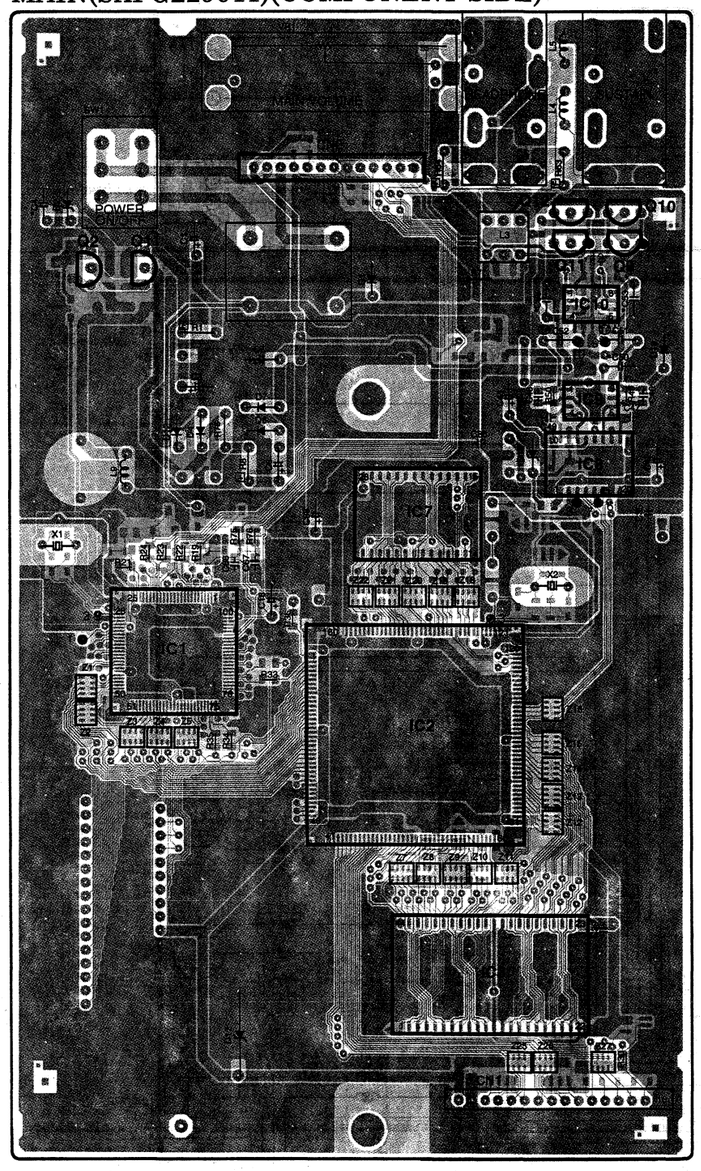


MAIN (B)/JACK P.C. Diagram

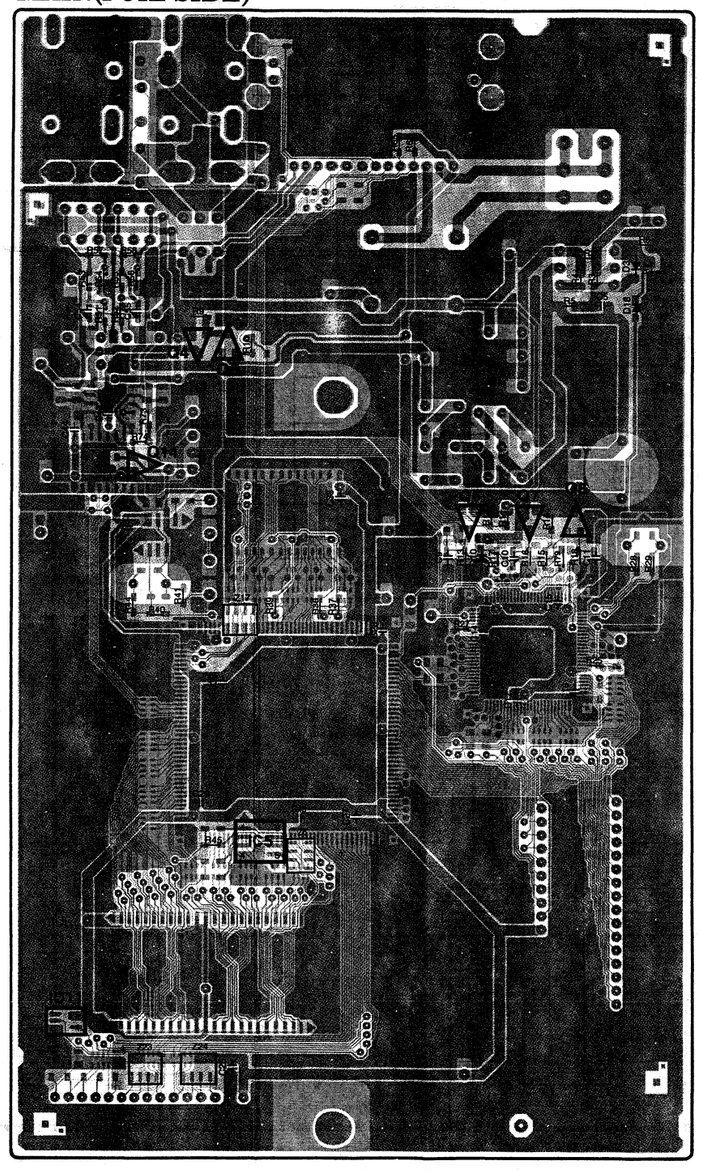


MAIN P.C. Board

MAIN(SXPG229011)(COMPONENT SIDE)



MAIN(FOIL SIDE)



WAVEFORM OF MAIN　MAINの波形

■ Measuring Condition　■波形の測定条件

Check Point ❻～❽

Set to the self-diagnostic mode following.

●While pressing two D#keys(①) simultaneously,turn on the power switch.

次のように自己診断モードに設定してください。

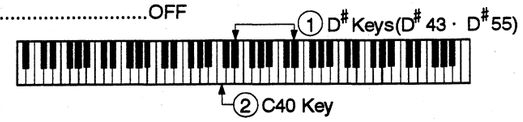
● 2つのD#キー(①)を同時に押しながら、電源スイッチをオンする。

● SOUND.....PIANO

● Main Volume.....Max

● Keyborad.....C40(②)

● Reverb.....OFF



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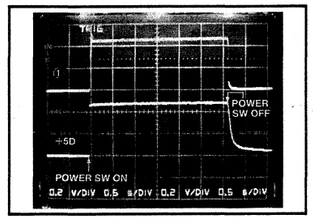

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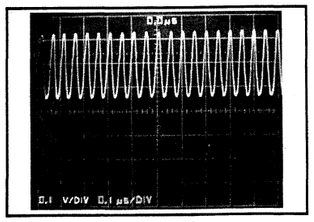

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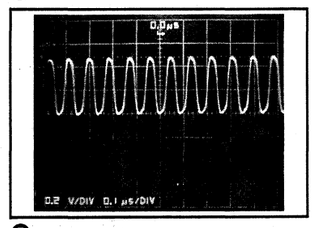

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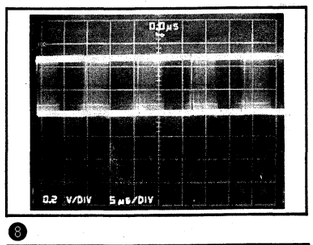

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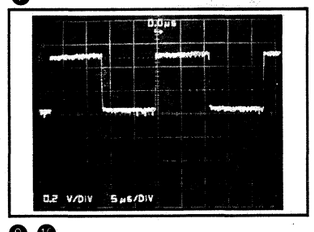

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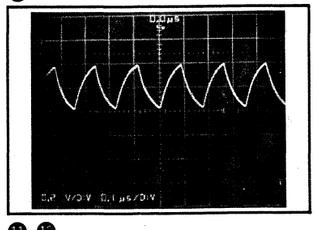
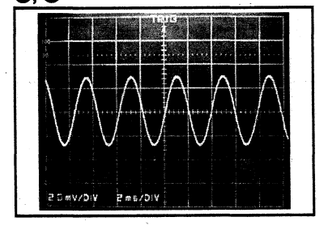


❾, ❿



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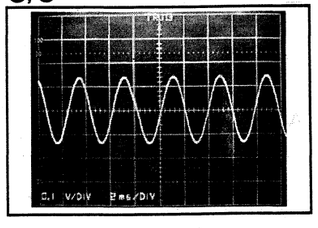
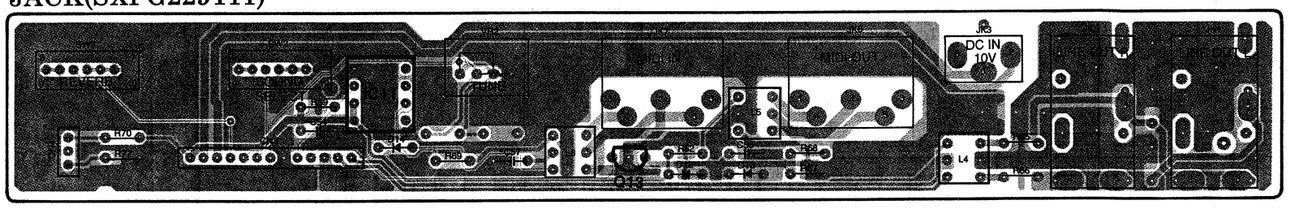


JACK/MKB1/MKB2 P.C. Board

JACK(SXPG229111)



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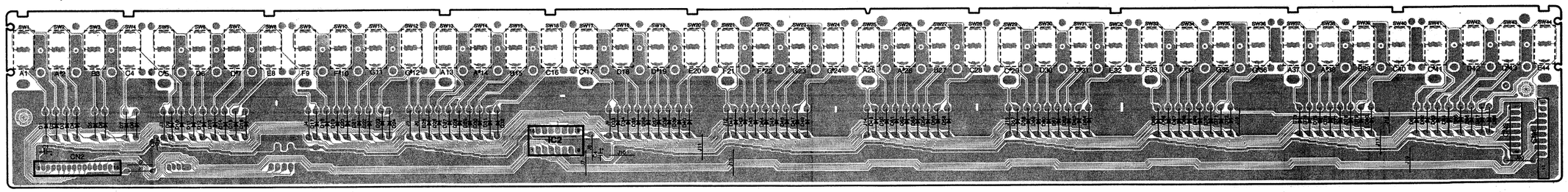

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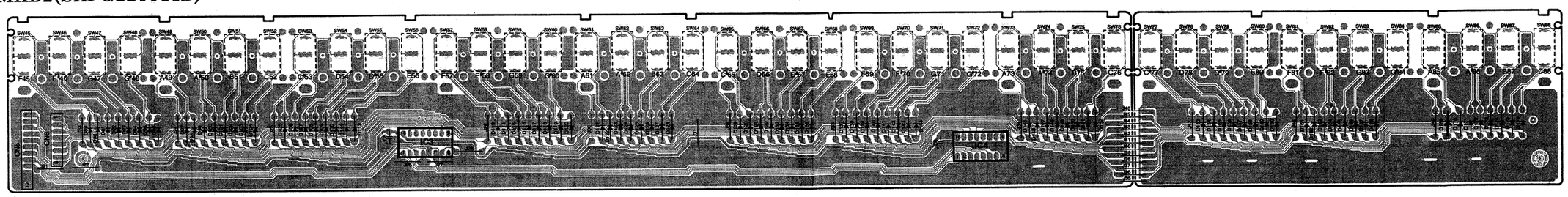
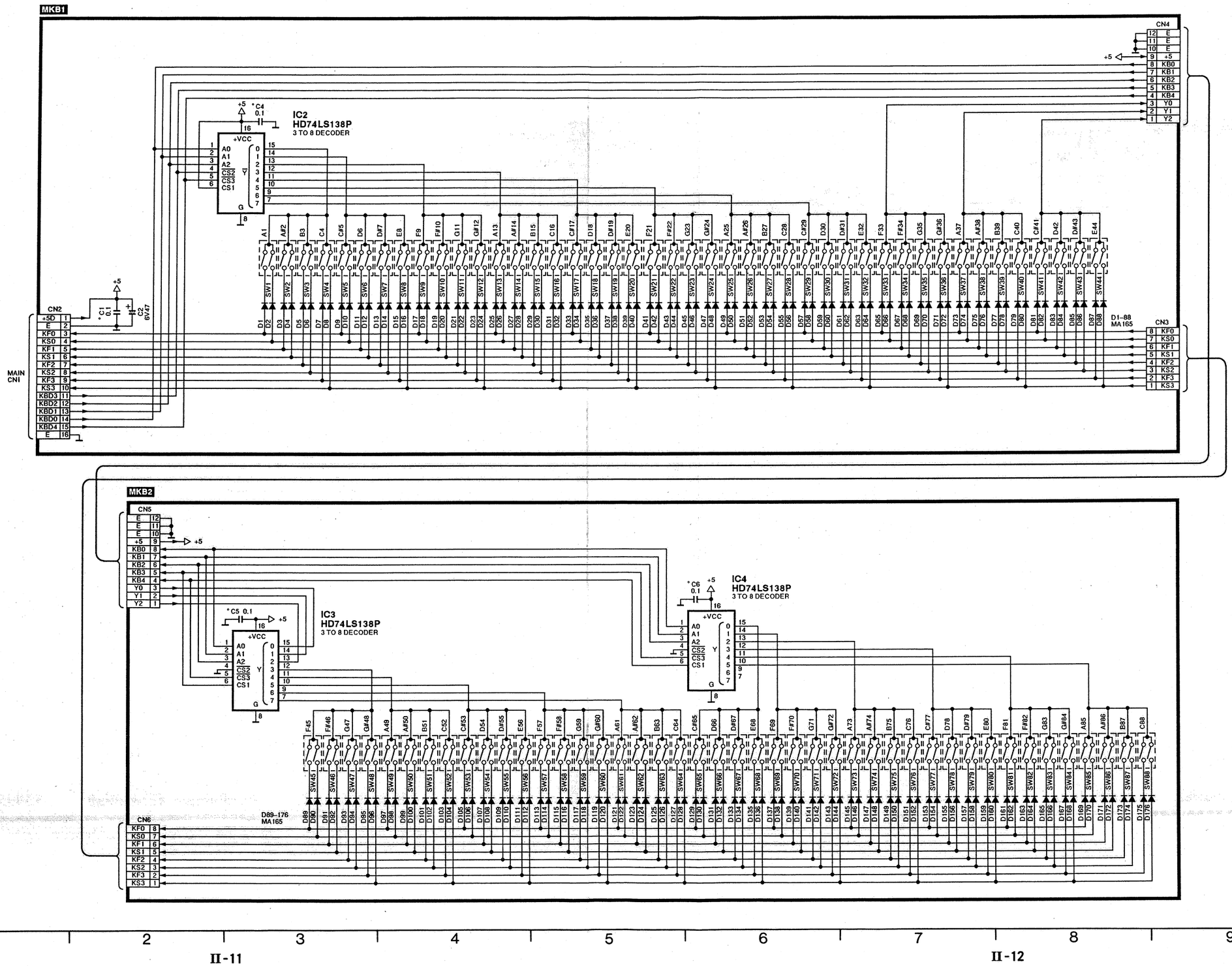


1 2 3 4 5 6 7 8 9

MKB1/MKB2 P.C. Diagram



REPLACEMENT PARTS LIST.....P.C.B. and Wiring Parts

Notes:

1. The marking(RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components,use only manufacturer's specified parts.
3. The "S" mark is service standard parts and may differ from producton parts.
4. ○ mark are new parts.
5. For part No. with area mark, check the area when placing an order.

■PRINTED CIRCUIT BOARD

	RTL	Area	Part No.	Description	P/S
○	RTL		SXPG229011	MAIN	1
○	RTL		SXPG229111	JACK	1
	RTL		SXPG226621A	MKB1	1
	RTL		SXPG226611B	MKB2	1

MAIN MAIN CIRCUIT

	Ref.No.	Parts No.	Description	P/S
	INTEGRATED CIRCUITS			
○	IC1	T93CM40F9204	1CHIP MICROCOMPUTER	1
	IC2	D96140GD001	TONE GENERATOR LSI	1
	IC3	QSIGX3C32003	32M BIT WAVEFORM ROM	1
	IC5	TC7W08F	DUAL 2-INPUT AND GATES	1
	IC7	LH5P832N-10	256K BIT PSEUDO STATIC RAM	1
	IC8	PCM69AU	D-A CONVERTER	1
	IC9,10	M5218AFP	OPERATIONAL AMPLIFIER	2
○	IC11	TC7S04F	INVERTER	1
	TRANSISITORS			
S	Q1	2SB621ARS	TRANSISTOR	1
	Q2	2SC1815GR	TRANSISTOR	1
	Q4	2SB709AR	TRANSISTOR	1
	Q5	2SD601AQ	TRANSISTOR	1
	Q6,7	2SB709AR	TRANSISTOR	2
	Q8	2SD601AQ	TRANSISTOR	1
	Q9	2SD592ARS	TRANSISTOR	1
	Q10	2SB621ARS	TRANSISTOR	1
	Q11	2SD592ARS	TRANSISTOR	1
	Q12	2SB621ARS	TRANSISTOR	1
	Q14	2SD601AQ	TRANSISTOR	1
	DIODES			
	D1	EK04	DIODE	1
	D2	MA1047H	ZENER,4.7V	1
	D3	MA110	DIODE	1
	D4,6,7	EK04	DIODE	3
	D10	MA110	DIODE	1
	D12	SVDGERA1502	RECTIFIER	1
	D16	MA1062M	ZENER,6.2V	1
	D17 ⚠	MA2062LF	ZENER,6.2V	1
	D18	MA110	DIODE	1
	D19	EK04	DIODE	1
	OSCILLATORS			
	X1	SVQGA20MX040	20MHz,CERAMIC OSCILLATOR	1
	X2	QSXG1A1128A	11.28MHz,CRYSTAL OSCILLATOR	1
	COMPONENT COMBINATIONS			
	Z1-5	EXBV8V101J	100 Ω × 4	5
	Z6	EXBS8V471J	470 Ω × 4	1
	Z7-15	EXBV8V471J	470 Ω × 4	9
	Z16	EXBV8V222J	2.2K Ω × 4	1
	Z17	EXBS8V471J	470 Ω × 4	1
	Z18-22	EXBV8V471J	470 Ω × 4	5
	Z23,24	EXBS8V103J	10K Ω × 4	2
	Z25-27	EXBV8V471J	470 Ω × 4	3
	COILS			
	L1	QLQGT2T100SA	10 μ H × 2	1
	L3	QLQGT3T131TA	130 μ H × 3	1
	L4,5	QLQGT1B800MB	80 μ H	2
	L9	QLQGT1B101KA	100 μ H	1
	JACKS			
○	JK1	QJJG009AA	HEADPHONE	1
	JK2	QJJG003AA	SUSTAIN	1
	SWITCH			
	S1 ⚠	QSPG1003AA	POWER SWITCH	1
	VARIABLE RESISTOR			
	VR1	QRVG20P01B53	5k Ω B,MAIN VOLUME	1
	RESISTORS			
	R1 ⚠	ERQ14AJ2R0	2 Ω ,1/4W,FUSE TYPE	1
	R2	ERJ6GEYJ332V	3.3k Ω	1
	R3	ERJ6GEYJ471V	470 Ω	1
	R4	ERJ6GEYJ101V	100 Ω	1
	R5	ERJ6GEYJ223V	22k Ω	1
	R6,7	ERJ6GEYJ331V	330 Ω	2
	R8 ⚠	ERQ14AJ2R0	2 Ω ,1/4W,FUSE TYPE	1
	R9	ERJ6GEYJ472V	4.7k Ω	1
	R10	ERJ6GEYJ102V	1k Ω	1
	R11	ERJ6GEYJ332V	3.3k Ω	1
	R12	ERJ6GEYJ102V	1k Ω	1
	R13-16	ERJ6GEYJ103V	10k Ω	4
	R17	ERJ6GEYJ104V	100k Ω	1
	R18,19	ERJ6GEYJ103V	10k Ω	2
	R21,22	ERJ6GEY0R00V	0 Ω	2
	R23,24	ERJ6GEYJ101V	100 Ω	2
	R25	ERJ6GEY0R00V	0 Ω	1
	R27	ERJ6GEYJ101V	100 Ω	1
	R28	ERJ6GEYJ105V	1M Ω	1
	R29	ERJ6GEYJ101V	100 Ω	1
	R30	ERJ6GEYJ471V	470 Ω	1
	R33-35	ERJ6GEYJ101V	100 Ω	3
	R36	ERJ6GEYJ102V	1k Ω	1
	R37-39	ERJ6GEYJ471V	470 Ω	3
	R40,41	ERJ6GEY0R00V	0 Ω	2
	R44	ERJ6GEYJ331V	330 Ω	1
	R45	ERJ6GEY0R00V	0 Ω	1
	R49,50	ERJ6GEYJ332V	3.3k Ω	2
	R51,52	ERJ6GEYJ473V	47k Ω	2
	R53	ERJ6GEYJ224V	220k Ω	1
	R54	ERJ6GEYJ222V	2.2k Ω	1
	R55	ERJ6GEYJ224V	220k Ω	1
	R56	ERJ6GEYJ222V	2.2k Ω	1
	R57,58	ERJ6GEYJ470V	47 Ω	2
	R62	ERJ6GEYJ103V	10k Ω	1
	R63,64 ⚠	ERD2FCVG100	10 Ω ,1/4W,FUSE TYPE	2
	R65	ERJ6GEYJ103V	10k Ω	1
	R73	ERJ6GEYJ221V	220 Ω	1
	R74-76	ERJ6GEYJ102V	1k Ω	3
	R77	ERJ6GEY0R00V	0 Ω	1
	R78	ERD25V0R00	0 Ω	1
	R79	ERJ6GEY0R00V	0 Ω	1
	CAPACITORS			
	C1	ECA1CM331	330 μ F,16V	1
	C3	ECEA1CKA470	47 μ F,16V	1
	C4	ECRF1H104ZF	0.1 μ F	1
	C5	ECUV1H221JG	220pF	1
	C6	ECEA1CKA100	10 μ F,16V	1
	C7	ECA1CM331	330 μ F,16V	1
	C9-12,14-17	ECUV1H104ZFX	0.1 μ F	8
	C18	ECEA1HKA010	1 μ F,50V	1
	C25,27-30,33,35 ,36,38,39	ECUV1H104ZFX	0.1 μ F	10
	C41	ECEA1CKA100	10 μ F,16V	1
	C42	ECEA0JKA101	100 μ F,6.3V	1
	C43-45	ECUV1H104ZFX	0.1 μ F	3
	C46	ECUV1H681JG	680pF	1
	C47	ECUV1H104ZFX	0.1 μ F	1
	C48	ECUV1H681JG	680pF	1
	C49	ECUV1H104ZFX	0.1 μ F	1
	C50	ECRF1H104ZF	0.1 μ F	1
	C51,52	ECQV1H224JM	0.22 μ F	2
	C53	ECRF1H104ZF	0.1 μ F	1
	C54,55	ECUV1H220JCN	22pF	2
	C63	ECRF1H104ZF	0.1 μ F	1
	C66,67	ECUV1H104ZFX	0.1 μ F	2
○	C68	ECA0JM471	470 μ F,6.3V	1

JACK JACK CIRCUIT

	Ref.No.	Parts No.	Description	P/S
	INTEGRATED CIRCUIT			
	IC11	QCPL-260L	PHOTO COUPLER	1
	TRANSISTOR			
S	Q13	2SA1015-GR	2SA933STRS(SUB. PART)	1
	DIODES			
	D12-14	MA165	DIODE	3
	COILS			
	L4-6	QLQGT3T131TA	130 μ H × 3	3
	JACKS			
	JK3 ⚠	QJSG005AA	DC IN 10V	1
	JK4	QJJG003AA	LINE OUT L	1
	JK5	QJJG003AA	LINE OUT R	1
	JK6	SJSG1460A	MIDI OUT	1
	JK7	SJSG1460A	MIDI IN	1
	SWITCHES			
	S2	SSSG2002A	SLIDE SWITCH	1
	S3	SSSG2002A	SLIDE SWITCH	1
	VARIABLE RESISTOR			
	VR2	QRVG12C01B55	500k Ω B,TUNE	1
	RESISTORS			
	R59	ERDS2TJ102	1k Ω	1
	R62	ERDS2TJ101	100 Ω	1
	R65,66	ERDS2TJ681	680 Ω	2
	R67	ERDS2TJ104	100k Ω	1
	R68	ERDS2TJ330	33 Ω	1
	R69,70,77	ERDS2TJ221	220 Ω	3
	CAPACITORS			
	C54	ECRF1H104ZF	0.1 μ F	1
	C55	ECCR1H221J	220pF	1
	C57	ECKF1E473ZV	0.047 μ F	1

MKB1 MANUAL KEYBOARD 1 CIRCUIT

	Ref.No.	Parts No.	Description	P/S
	INTEGRATED CIRCUIT			
	IC2	HD74LS138P	3TO8 DECODER	1
	DIODES			
	D1-88	MA165	DIODE	88
	CAPACITORS			
	C1	ECRF1H104ZF	0.1 μ F	1
	C2	ECEA0JKA470	47 μ F,6.3V	1
	C4	ECRF1H104ZF	0.1 μ F	1

MKB2 MANUAL KEYBOARD 2 CIRCUIT

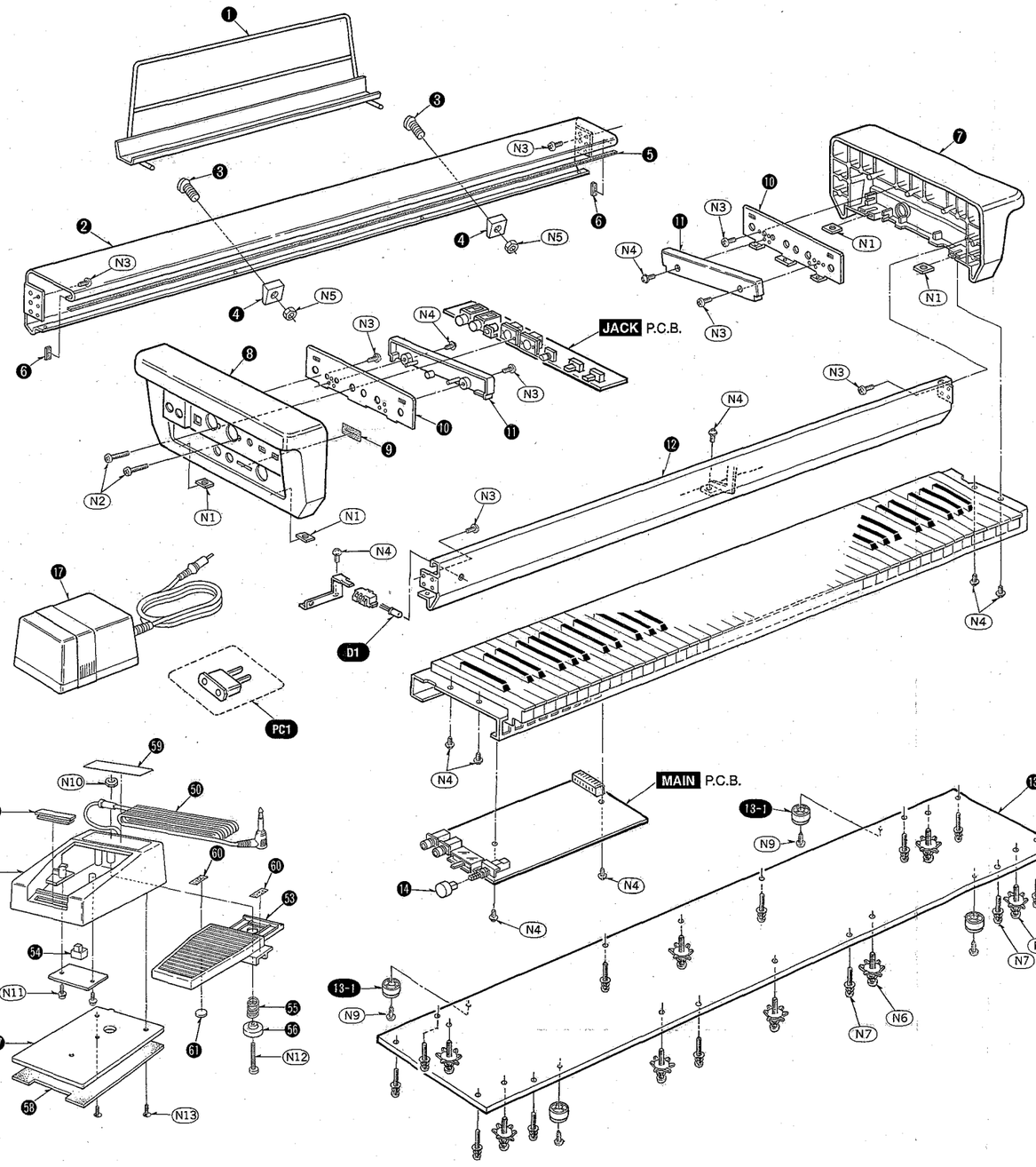
	Ref.No.	Parts No.	Description	P/S
	INTEGRATED CIRCUIT			
	IC3,4	HD74LS138P	3 TO 8 DECODER	2
	DIODES			
	D89-176	MA165	DIODE	88
	CAPACITORS			
	C5,6	ECRF1H104ZF	0.1 μ F	2

■WIRING PARTS

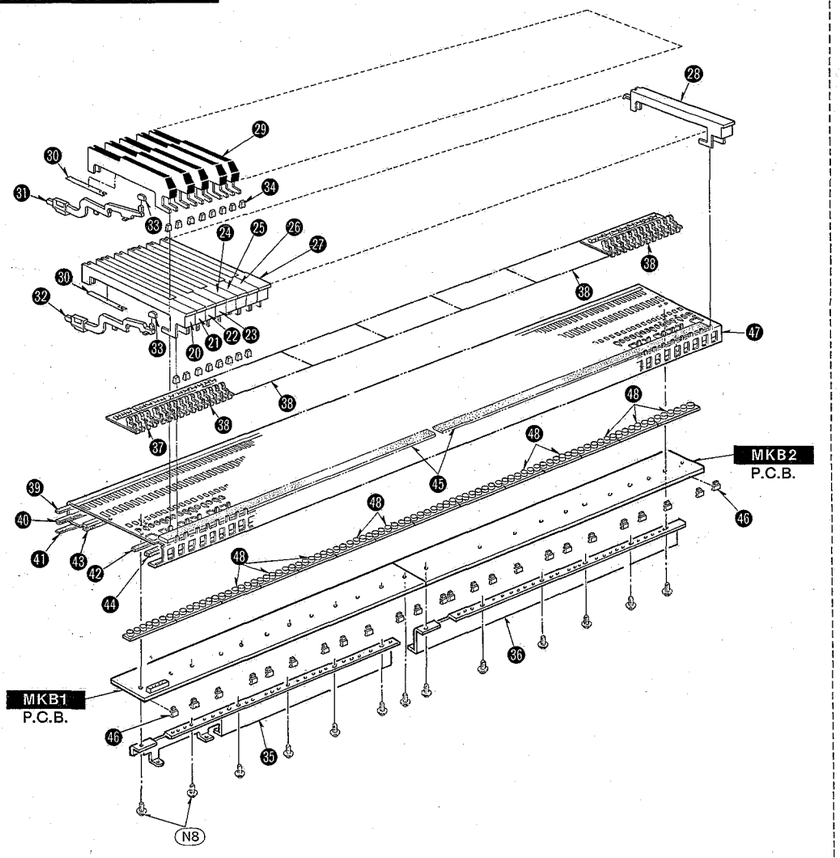
	Ref.No.	Parts No.	Description	P/S
○	W1	QEXGSS16020B	CONNECTOR WITH WIRE	1
○	W2	QEXGSS13015B	CONNECTOR WITH WIRE	1
○	W3	QEXGSM02011B	CONNECTOR WITH WIRE	1
	W4	QEUGKCH06BB	FLAT CABLE	1
○	W5	QEUGK8H07BB	FLAT CABLE	1
○	W6	QEXGSM03007B	CONNECTOR WITH WIRE	1

CABINET PARTS LOCATION

CABINET



MANUAL KEYBOARD



REPLACEMENT PARTS LIST.....Cabinet and Chassis Parts

Notes:

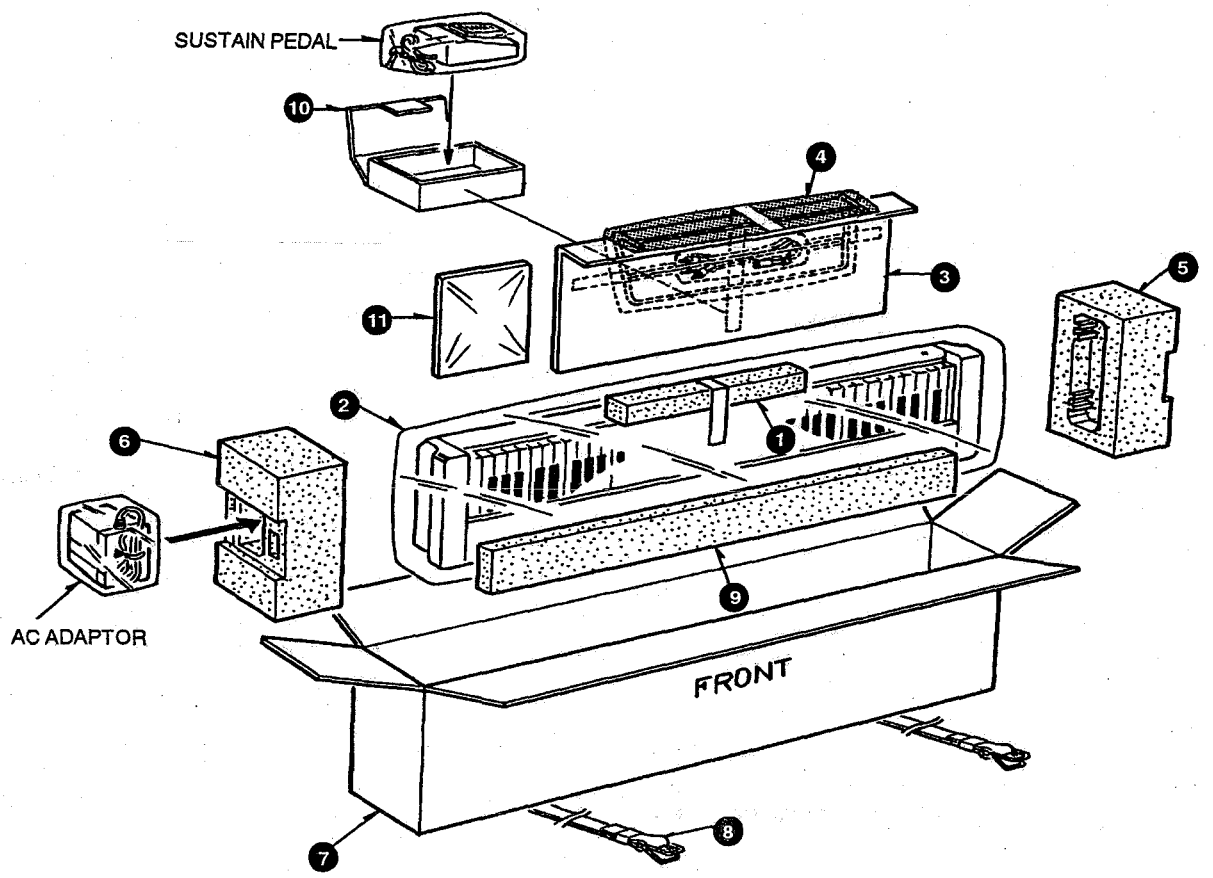
1. The marking(RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. ○ mark are new parts.
3. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components,use only manufacturer's specified parts.
4. For part No. with area mark, check the area when placing an order.
5. The raw material indication for synthetic resin.
   In order to facilitate classification of parts of synthetic resin manufacture and to promote the recycling of natural resources,a raw material symbol for such parts is indicated in the Ref. No./ Material column.

■CABINET & CHASSIS PARTS

	Ref.No.		Parts No.	Description	P/S
			DIODE		
	D1		LN29RP	LED,POWER INDICATOR	1
			PLUG		
	PC1	⚠	SJP5213-1	ATTACHMENT PLUG, X XT XP	1
			CANBINET PARTS		
	1		QYAG3001AA	MUSIC STAND	1
○	2		QKSGA001DA	TOP COVER	1
	3		SHRG9790A	SLEEVE FOR MUSIC STAND	2
○	4		SHRG9800B	SPACER	2
	5		QMFG1081AA	FELT	1
	6		QMFG1057AA	FELT	2
○	7	PS	QGPG0020BA	ORNAMENT	1
○	8	PS	QGPG0020EA	ORNAMENT	1
	9		QMFG4043AA	CUSHION	1
	10		QKSGZ002AA	CHASSIS(BLACK)	2
○	11	PS	QGPG0022AA	END COVER PANEL	2
○	12		QKSGE007DA	ORNAMENT	1
○	13		QKQGK011BA	BOTTOM BOARD ASS'Y	1
	13-1		SHRG2160A	LEG	4
	14		SBCG1660A	BUTTON,POWER SWITCH	1
○	17	⚠	QFAG016AB	AC ADAPTOR, EN EZ EW EF EA EH EP XP XW	1
	17	⚠	QFAG017AA	AC ADAPTOR, M MC XM	1
○	17	⚠	QFAG018AB	AC ADAPTOR, EK XD	1
	17	⚠	QFAG016AA	AC ADAPTOR, X XS XT	1
	17	⚠	QFAG019AA	AC ADAPTOR, XL XR	1
			MANUAL KEYBOARD		
	20	AS	QMWG1001AB	WHITE KEY (FIRST OCTAVE A KEY)	1
	21	AS	QMWG1002AB	WHITE KEY(B KEY)	8
	22	AS	QMWG1003AB	WHITE KEY(C KEY)	7
	23	AS	QMWG1004AB	WHITE KEY(D KEY)	7
	24	AS	QMWG1005AB	WHITE KEY(E KEY)	7
	25	AS	QMWG1006AB	WHITE KEY(F KEY)	7
	26	AS	QMWG1007AB	WHITE KEY(G KEY)	7
	27	AS	QMWG1008AB	WHITE KEY(A KEY)	7
	28	AS	QMWG1009AB	WHITE KEY (TOP OCTAVE C KEY)	1
	29	AS	QMWG2001AC	BLACK KEY	36
	30		SUSG534A	SPRING	88
	31		QMWG8019CA	HAMMER(BLACK KEY)	36
	32		QMWG8017DA	HAMMER(WHITE KEY)	52
	33		SHGG9121A	RUBBER CAP(HAMMER)	88
○	34		QMWG8037AA	KEY GUIDE	88
○	35		SUWG3154B	ANGLE	1
	36		SUWG3154A	ANGLE	1
	37		QMWG8022AA	FULCURUM(4PCS.ON ONE)	1
	38		QMWG8021AA	FULCURUM(12PCS.ON ONE)	7

	Ref.No.		Parts No.	Description	P/S
	39		SHRGA9080A	SPONGE	2
	40		QMFG1073AA	FELT	2
	41		QMFG1230AA	FELT	2
	42		QMFG1061AB	FELT	2
	43		QMFG1101AA	FELT	2
	44		QMFG1231AC	FELT	2
	45		QMFG1086AB	FELT	2
	46		SHRG9751A	P.C.B.HOLDER	24
○	47		QMWG3022AA	CHASSIS	1
	48		QMWG6006AA	RUBBER SWITCH(8PCS.ONONE)	11
			SUSTAIN PEDAL		
	50		SWPG30A	PEDAL CORD	1
	51		SHGG8290A	PEDAL STOPPER	1
	52	ABS	STBG7010A	PEDAL CASE	1
	53	ABS	STBG2320A	PEDAL	1
	54		SSHG1034A	PUSH SWITCH	1
	55		SUSG180A	SPRING	1
	56		SHRG9240A	SPACER	1
	57		SKUG40AS	BOTTOM PLATE	1
	58		SHGG3060A	CUSHION	1
○	59		SGKG1130A	LABEL	1
	60		SHSG2190A	FELT	2
	61		SHGG8300A	RUBBER	1
			SCREWS		
	N1		SNEG260A	NUT	4
	N2		XSN3+12FZS	SCREW	2
	N3		XTB4+14CFZ	SCREW	8
	N4		XTW3+8T	SCREW	10
	N5		XNG8DF	NUT	2
○	N6		QHDG021AB	SCREW WITH WASHER	8
○	N7		QHDG047AA	SCREW WITH WASHER	12
	N8		XTW3+10T	SCREW	14
	N9		XTB3+14AFZ	SCREW	4
	N10		XNG5BS	NUT	1
	N11		XTW3+8Q	SCREW	2
	N12		XSN5+30S	SCREW	1
	N13		XTS3+12G	SCREW	2

PACKING



■PACKING PARTS

	Ref.No.		Parts No.	Description	P/S
			PACKING PARTS		
○	1	PS	QPNG0489AA	PAD	1
	2	PE	QPFG012AA	POLYETHYLENE BAG	1
	3		QPNG0315AA	CARDBOARD	1
	4	PE	SPHG1770A	POLYETHYLENE BAG	1
	5	PS	QPNG0316AA	PAD	1
	6	PS	QPNG0317AA	PAD	1
○	7		QPGG0386AA	PACKING CASE,PAPER	1
	8		SPSG40A	BAND	2
○	9	PS	QPNG0488AA	PAD	1
○	10		SPNG1520B	PACKING CASE,PAPER	1

	Ref.No.	Parts No.	Description	P/S
		OPERATING INSTRUCTION MANUAL		
○	11	QQFGP30BA	OPERATING INSTRUCTION MANUAL, M	1
○	11	QQFGP30CA	OPERATING INSTRUCTION MANUAL, LN MC EK EW EF EA EH EP X XL XR XS XM XD XT XP XW	1
○	11	QQFGP30DA	OPERATING INSTRUCTION MANUAL, F7	1